Statistics Canada

2016 Census Strategy Project: Data Uses and Requirements Report

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Finally, the drafting of this report would not have been possible without the commitment of many Census Program data users. Statistics Canada therefore thanks its federal department partners, the provincial and territorial focal points, representatives from municipal organizations, national aboriginal organizations, organizations representing linguistic minorities, Canadians with disabilities or immigrants, as well as secondary data distributors, umbrella organizations or immediate end users from non-profit and commercial sectors.

The information pertaining to certain names of laws, organizations and surveys does not appear in both official languages because the information source is not governed by the *Official Languages Act*.

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1. Executive summary

Statistics Canada's mandate is to ensure that Canadians have access to a trusted source of statistics that meet their highest priority information needs. The efficient production of relevant, accessible, high-quality statistics helps to ensure that the Canadian economy functions efficiently and our society is governed effectively (Statistics Canada 2011a).

As part of this mandate, Statistics Canada is responsible under the *Statistics Act* (R.S.C., 1985, c. S-19) for conducting the Census of Population every five years. By law, the government (by an order in council) prescribes the questions to be asked in the census. By the same law, each person is required to provide the information requested in the census and Statistics Canada must protect the confidentiality of the personal information provided by respondents.

As part of Statistics Canada's customary process to review and evaluate its statistical programs, and in light of the changes to the 2011 Canadian Census Program[1] and changes to census-taking approaches internationally, Statistics Canada launched the 2016 Census[2] Strategy Project in December 2010. The objective of this project was to study options and deliver a recommendation to the federal government on the methodology of the 2016 Census Program in 2012. While this timeframe is needed to ensure a decision on approach is made in time to then allow sufficient time for the planning, development, testing and implementation of the methodology for 2016, it does not provide sufficient time to fully analyze the 2011 National Household Survey (NHS) data quality, analysis that will be completed in 2013 when the NHS results are released. This project was further mandated to develop a content determination framework, including criteria for inclusion of content in the Census Program.

To develop this content determination framework it was necessary to: examine content determination approaches elsewhere; to consider the Canadian context; and ultimately to gather information on high priority Census Program data uses and requirements directly from data users. The process to gather this information employed similar communication approaches of previous Census Program consultations (Statistics Canada 2008, p. 7), but requested more detailed information from data users on their data uses and requirements.

The input received from data users over the summer and fall of 2011 as part of the 2016 Census Strategy Project confirmed the critical role played by the Census Program in delivering information on a range of topics, with over 800 uses of Census Program data reported.[3] First and foremost, population counts produced by the Census Program are required explicitly by numerous pieces of legislation, meaning census data are explicitly mentioned. These population counts are at the heart of Statistics Canada's Population Estimates Program (PEP) that relies on the most recent Census Program data, along with administrative data provided by other federal, provincial and territorial government departments, to produce annual and quarterly estimates of

1. For the purpose of this report, the term 'Census Program' will be used to refer in a general way to the Canadian Census of Population, either the short and long forms from 1971 to 2006, the 2011 Census of Population and National Household Survey or any other Census of Population prior to 1971.
2. It was understood that census here referred to the Census Program as defined earlier.
3. Stakeholders and data users in the federal, provincial and territorial governments, as well as representatives of local government and those in the non-government sector, were asked to describe their uses of Census Program data. Feedback of these discussions does not necessarily reflect all the uses by these groups, as time constraints prescribed a prioritization of uses to be reported. Furthermore, not all stakeholders were included given the time limits for collecting and analyzing the feedback.

the Canadian population at various levels of geography between censuses. The PEP responds to statutory requirements for the calculation of revenue transfers and cost-sharing programs between the various levels of government (Statistics Canada 2011b) and produces information to calculate major federal transfers to the provinces and territories under the *Federal-Provincial Fiscal Arrangements Act*. It is also a source of information for the allocation of House of Commons seats to provinces in the recent *Fair Representation Act* that received Royal Assent on December 16, 2011. The PEP is also used as a source of benchmark data for many other social and household surveys at Statistics Canada and contributes to the integrity of the broader social statistics system.

Other data produced by the Census Program also respond to key legislation. The official languages content is an example where there is an explicit legislative requirement for the use of census data for specific language variables where it is stated in subparagraph 3(a)(ii) that the method of estimating the "English or French linguistic minority population" is on the basis of "after the results of the 1991 census of population are published, the most recent decennial census of population for which results are published..." (*Official Languages (Communications with and Services to the Public) Regulations*, SOR/92-48). The Census Program provides data at low level of geographies and for small populations where there is no alternative data source. For example, Human Resources and Skills Development Canada, the Public Service Commission and Treasury Board Secretariat reported that *Employment Equity Regulations* require data on Aboriginal peoples and visible minorities which are not available in administrative databases but are provided by the Census Program.

Data users demonstrated the requirements for Census Program information for all topics. In particular, describing information requirements for data at low levels of geography and for small populations for resource allocation; service delivery; the development, evaluation and monitoring of policy and programs; research; and other uses supporting both the government and the non-government sectors, for which there are currently no suitable alternative data sources. The data users likewise provided evidence of the importance of multivariate analysis which calls for both topics which can identify populations of interest, but also topics which can describe the labour, income, education and housing conditions of these populations, that is to say their socioeconomic outcomes.

Analysis of the feedback revealed that relative priorities of different topics could be identified through the information collected using this type of consultation questionnaire instrument. This analysis, along with a review of international practices, and the advice of the National Statistics Council (National Statistics Council 2010), provided the quantity and quality of information needed to develop a more structured and transparent framework for determining Census Program content in the future.

The balance between relevance, quality, respondent burden and privacy will need to be examined as part of the content determination process for the 2016 Census Program.[4] External stakeholders will be consulted on their uses of the Census Program data to determine relevance (including timeliness) and quality requirements. Priorities would be assigned based on the

4. This framework assumes a traditional approach for the Census Program, one that collects the characteristics from the individuals and housing units at a specific point in time. A different approach does not rule out the process explained in this report entirely, but would require that the process be adjusted in light of the new approach.

strength of user need. In particular, the consultation findings would be examined in light of respondent burden, societal privacy concerns and other considerations, such as costs, that Statistics Canada must take into account. Results of this assessment could indicate content to be collected in the 2016 Census Program, as well as content not to be collected in the 2016 Census Program though perhaps which could be measured through other statistical programs.

Such a content determination process provides an open and transparent framework for stakeholders and data users, as well as for the Canadian public, and can demonstrate evidence-based decision making in reaching content determination conclusions.

2. Introduction

Statistics Canada's mandate is to ensure that Canadians have access to a trusted source of statistics that meet their highest priority information needs. The efficient production of relevant, accessible, high-quality statistics helps to ensure that the Canadian economy functions efficiently and our society is governed effectively (Statistics Canada 2011a).

As part of Statistics Canada's customary process to review and evaluate its statistical programs, and in light of the changes to the 2011 Canadian Census Program and changes to census-taking approaches internationally, Statistics Canada launched the 2016 Census Strategy Project in December 2010. The objective of the project was to study options and deliver a recommendation on the methodology of the 2016 Census Program to the federal government early enough in 2012 to allow sufficient time for the planning, development, testing and implementation of the 2016 Census Program methodology, and very importantly, the approval of funding for the planning and development phase.

This 12-month project reviewed the approaches for population censuses that exist around the world and evaluated their applicability to the Canadian context, as well as their adherence to Statistics Canada's mandate and business model. The project included a review of the constitutional and statutory requirements for the census and provided a content determination framework, including criteria for inclusion of content in the 2016 Census Program.

This report describes the process for the information gathering exercise on data uses and requirements, which took place over the summer and fall of 2011, as well as the findings of this exercise. It proposes a framework for determining the content of 2016 Census Program and concludes with recommendations on the consultation that should be undertaken as part of the content determination process for the 2016 Census Program.

3. Research on Census Program data uses and requirements

Over the summer and fall of 2011 Statistics Canada contacted a selection of key external data users and asked these data users about their needs for information from the Census Program in terms of the seven dimensions[5] in Step 1 of Table 1 in Section 5, and further described in Section 5.1. The objective was to gain a better understanding of the role of Census Program[6] data in their operations and the impact if these data were not available, as expressed by the data users' themselves.[7] The reasons for this information gathering activity were three-fold: first, to have a better understanding of the highest priority Census Program information needs in order to effectively address how different approaches for population censuses can respond to user requirements; second, to determine if the dimensions described in Section 5.1 would be useful in distinguishing priorities among uses of Census Program topics/variables and whether these dimensions could be used to build a content determination framework; and third, to 'test drive' a possible consultation instrument for use in the 2016 Census Program.

Data user engagement was iterative. The first wave, held early in the summer of 2011, focused on the data uses and requirements of government users, specifically the federal government funding partners,[8] as well as Elections Canada and Status of Women Canada, who are important federal government users of Census Program information (see Appendix A for the full list of departments and agencies that were asked to participate), the provincial and territorial statistical focal points, and three organizations representing local governments.[9] The intent was to confirm and improve Statistics Canada's understanding of legislation, regulations, policies and programs which require Census Program data, including those data uses for the 2011 National Household Survey.

The second wave of user engagement was conducted from mid-summer to fall of 2011 to expand the repository of Census Program data uses and information requirements to include the non-government sector. Included in this group were selected direct end-users in the non-profit and business sectors, a number of secondary distributors, umbrella-type organizations or national

5. The seven dimensions are: (1) strength of user need, (2) size of the population of interest, (3) suitability of alternative sources, (4) multivariate analysis, (5) comparability across Canada, (6) continuity over time, and (7) frequency of outputs.
6. The user engagement held in 2011 specifically referred to census and NHS data. As mentioned earlier in this report, census and NHS are referred to as Census Program in this report.
7. Internal discussions were held as well, but the findings of those discussions are not within the scope of this report. Further, while not part of this information gathering process per se (the Advisory Committee on Demographic Statistics and Studies and the Advisory Committee on Social Conditions were briefed at different stages of the 2016 Census Strategy Project, but were not asked to report on information requirements of their respective domains), researchers are also major users of Census Program data. For example, between July 2007 and December 2010, 203 research projects using Census Program data were undertaken by university, federal or provincial government researchers at Statistics Canada's Research Data Centres (RDCs). Census Program microdata files were first added to the RDC data holdings in 2007.
8. The Fiscal Framework provides funding for the basic component of the Census of Population. Federal government funding partners, a group of departments, particularly those deemed to be 'large' government departments according to the Management Accountability Framework criteria, contribute funds to cover the funding shortfall for the comprehensive census.
9. These organizations were the Canadian Federation of Municipalities, the Canadian Council on Social Development and the Regional Information Systems Working Group.

associations representing the non-profit and business sectors, as well as various associations representing sectors of the population which are the focus of government policy.[10]

3.1 Data uses and requirements questionnaire and methodology

The data uses and requirements questionnaire, presented in Appendix B (Wave 1) and Appendix C (Wave 2), was designed to collect specific details on the legislative, regulatory, policy, program and other uses of Census Program data. The questionnaire was divided into three parts, (1) explicit uses, i.e., where census is explicitly mentioned as the source of data in the legislation, regulation, policy or program, (2) implicit uses, i.e., where census is not explicitly mentioned, but it has been the traditional source, and (3) other uses. Details asked for each use were:

- Purpose for which Census Program data are used, e.g., resource allocation, service delivery, policy development, multivariate analysis, geographic distributions, etc.
- Topics required.
- Level(s) of geography needed (provincial, census metropolitan area (CMA), municipal, neighbourhood, etc.).
- Requirements for data on specific population groups (e.g., Aboriginal peoples, lone parent families, condominium dwellers, etc.).
- How long data are useable.
- Importance of data comparability across the country.
- Importance of data comparability over time (trend analysis).
- Importance of a point-in-time estimate (snapshot) versus a rolling estimate.[11]
- Impact if data not available.

Note that most of these questions correspond to one of the dimensions of Step 1 outlined in Section 5.1.

The questionnaire also asked organizations to identify their existing data holdings which might be considered in evaluating the feasibility of increased use of administrative data in future censuses, as well as any barriers associated with accessing or limitations in using these data holdings.

The data were collected from Wave 1 users via a web-based questionnaire, while the input from Wave 2 users was collected from an electronic copy of the questionnaire which data users could complete electronically or provide a paper submission. Other data users were provided guidelines for a written submission.

10. Within this group were national Aboriginal organizations, organizations representing official language minority communities, as well as, organizations providing services to, or representing, Canadians with disabilities and the immigrant community.
11. Data users were provided with a definition of this concept, that rolling estimates are defined as data collected via a continuous survey, which are cumulated over time to provide sufficient sample size. Rolling estimates are based on moving averages over a certain time period (e.g., one-year averages for large areas, three-year averages for medium-sized areas and five-year averages for small areas). Each year, new estimates are produced by replacing the oldest year of data with the most recent year.

3.2 Responses and limitations

More than 800 uses of Census Program data were identified by over 60 responding organizations. While extensive, this should not be considered a complete list of uses for two reasons. First, organizations were instructed to limit their feedback to those uses of highest priority, when necessary, in order to be able to provide feedback within an established time period. Second, given time constraints, this information gathering activity did not extend to all possible users. In particular, there was no direct contact with data users at the local level. Rather, organizations representing municipalities were contacted.[12] Further, it is possible that among these 800 uses there is some duplication as the organizational lead in some cases coordinated input from a number of sources. It is also possible that some uses may have been reported by more than one user, which would be most likely among data users in the government sector where there are similar jurisdictions and information needs, such as the provinces and territories, where the same use may have been reported by two jurisdictions.

The information gathered, while from a range of data users, does not capture the full extent of information requirements. For this reason, and because the instrument (questionnaire) did not address information needs at the question level, no prioritized list of content by question is being presented in this report.

To validate the information provided, each organization that responded to the on-line questionnaire was provided a report summarizing their responses, as with the on-line questionnaire there was the potential for participants to unknowingly overwrite some of their earlier responses when they completed the questionnaire in multiple sessions. These data users were able to confirm the findings in their reports, making modifications if necessary. Information provided by users in Wave 2 was not validated in this manner as the information on their Census Program data uses and requirements was collected via a survey instrument in Microsoft Word or a written submission.

3.3 Findings

This section is organized into sub-sections which highlight the feedback received on uses, including content needs, multivariate analysis requirements, the potential use of alternative data sources, and the importance of a point-in-time estimate (snapshot) versus a 'rolling' estimate.

3.3.1 Uses and content requirements

The information compiled from the data uses and requirements questionnaire has served to inform Statistics Canada on the broad range of uses and has provided additional details on the nature of the information needed to support these uses. Appendix D lists the reported uses by user group and indicates the required topics for each use. The rest of this section provides some highlights of some of the many uses of Census Program information contributed by data users.

Population counts are required explicitly by numerous pieces of federal legislation and are also associated with the population estimates produced at Statistics Canada by the Population Estimates Program (PEP) and used, as part of the funding formula, to determine the distribution

12. These organizations include the Canadian Federation of Municipalities, the Canadian Council on Social Development and the Regional Information Systems Working Group.

of major federal transfers[13] to the provinces and territories under the *Federal-Provincial Fiscal Arrangements Act*. It is critical that these population estimates, and the census population counts as input, be highly accurate as these transfers accounted for $57.7 billion in 2011/2012 and were estimated to account for about 19% of provincial and territorial revenues in that year (Department of Finance Canada 2012). The PEP is also a source of information for the allocation of House of Commons seats to provinces in the recent *Fair Representation Act* that received Royal Assent on December 16, 2011. Thus, questions that are required to produce high quality population counts from the census are the highest priority and as such, have always been asked of 100% of the population on a mandatory basis (Royce 2011, p. 48).

The official languages content is an example where there is an explicit legislative requirement for the use of census data for specific language variables where it is stated in subparagraph 3(a)(ii) that the method of estimating the "English or French linguistic minority population" is on the basis of "after the results of the 1991 census of population are published, the most recent decennial census of population for which results are published..." (*Official Languages (Communications with and Services to the Public) Regulations*, SOR/92-48). High quality data are needed, but in the context of a traditional census, sufficient quality has been obtained in the past by asking the question of a sample.

This process confirmed that for all topics in the 2011 Census Program, there continues to be requirements for information on small populations where there are no alternative sources, and for which the information serves a purpose with high importance. For example, Human Resources and Skills Development Canada, the Public Service Commission and Treasury Board Secretariat reported that *Employment Equity Regulations* require data on Aboriginal peoples and visible minorities which are not available in administrative databases but are provided by the Census Program.

Canada Mortgage and Housing Corporation indicated that they require housing information at a small area level of geography and for small populations, such as persons with disabilities and Aboriginal peoples living off reserve, to measure core housing needs. The Regional Information Systems Working Group, which is comprised of professional planners concerned with data, systems and research issues primarily directed to land use planning, forecasting and municipal decision-making functions in the province of Ontario, stated that Census Program housing data are essential for the preparation of municipal official plans and for programs related to housing and homelessness.

The Government of Ontario stated that they use Census Program labour market information to support economic development initiatives such as the Canada-Ontario Labour Market Agreement Annual Plan, Employment Ontario Policy Framework and Ontario Job Futures occupational profiles. Data are used to identify client groups and communities in need of labour market programming, including sub-groups such as recent immigrants, youth and older workers, as well as to profile occupations in local labour markets. The Government of Alberta draws on Census Program data for many uses, including the determination of per capita funding under the *Municipal Government Act* and for input to the Labour Market Information reports which support understanding of the needs of Albertans. The Government of Saskatchewan uses Census

13. These include the Canada Health Transfer, Canada Social Transfer, equalization and Territorial Formula Financing.

Program data to identify the size of specific populations in support of uses such as *The Multiculturalism Act*, advance gender equality/status of women, and disability policy.

The province of Quebec reported information requirements on the labour market for specific groups of the population when they noted that for the use under the heading « Ministère de l'Emploi et de la Solidarité sociale: *Act respecting the ministère de l'Emploi et de la Solidarité sociale and the Commission des partenaires du marché du travail* (2001, c.44, s. 28; 2007) » the need for a broad range of information, including the following:

- Basic data on the labour market (employment income by occupation, age distribution, sex, and job tenure by occupation and the industry, employment level by occupation, educational attainment by occupation).
- Portrait of the most disadvantaged clientele in the labour market (immigrants, Aboriginals, disabled people, etc.)

Their feedback also noted that the Census Program is the most important source of information, not to say the only source that allows the collection of detailed and reliable information about some population groups (labour market activities of the immigrant population, cultural communities, behaviour of seniors, individuals with low level of education, disabled people, etc.).

The Public Health Agency of Canada (PHAC) uses Census Program data as a denominator to calculate rates of disease among different populations and to describe subpopulations and/or socioeconomic factors and conditions that influence vulnerability to various diseases (e.g., sexually transmitted infections, tuberculosis and viral hepatitis). Census Program data are also used by PHAC to design interventions for these populations, to create documents for public health professionals, and to determine sampling frameworks for research initiatives, work which is critical to the prevention and control of these diseases. Specifically, PHAC reported that no other nationally representative data can support this work which is critical to the prevention and control of these infections and to providing leadership and support to public health professionals working with vulnerable populations.

Census Program data on place of work/travel to work are used by Transport Canada for transportation policy development and planning, and by the Transportation Association of Canada to determine travel demand forecasts for urban areas and to examine and forecast the spatial distribution of employment. The Government of Ontario reported that the NHS is the only source of consistent data across the province that provides place of work and place of residence linkages, commuting patterns and distances, and occupation details, which are critical for performance reports, program monitoring and evaluation, modelling, and geography distributions.

Non-government data users also identified important uses of Census Program data. For example, Census Program data are used by companies for retail site location, market segmentation and human resource planning. Pitney Bowes reported that over the last five years, their customers have relied upon their Statistics Canada-based datasets to direct their investment in billions of dollars in newly built retail outlets. Environics Analytics has developed market segmentation products to help businesses, governments and non-profit organizations improve their ability to segment, target and locate customers. The Marketing Research and Intelligence Association noted the importance of Census Program information on the workforce, especially detailed information on occupation and field of study, in developing human resource plans. The

association also reported that the Census Program is the only source of reliable information on these topics.

The United Way of Greater Toronto reported using Census Program data for priority setting and strategic planning. Imagine Canada, a national charitable organization whose cause is to support and strengthen Canada's charities and non-profit organizations so that they can in turn support the Canadians and communities they serve, does policy development, research and marketing using Census Program information. National Aboriginal organizations, as well as the First Nations Statistical Institute, use Census Program data for resource allocation, program planning and policy development. The Quebec Community Groups Network uses Census Program information to support the work of the community sector serving the linguistic minority community, including helping other partners to understand who they are, their differences and what can be done to enhance the vitality of Canada's English linguistic minority communities. The Fédération des communautés francophones et acadienne (FCFA)[14] has said, among other things, that the use of census data is for the enforcement of the regulation in Part IV of the *Official Languages Act*. NHS data will be used to measure the vitality of communities and identify the positive results of programs and services in communities, as well as weaknesses regarding the development of communities, in order to influence the development and implementation of public policies to promote this community development and growth.

Data users also reported that in addition to the current topics included in the 2011 Census and 2011 NHS, there are information requirements for new content for specific uses. The most frequent of these additional topics are geography and population, and occupation. Various characteristics, such as place of work, employment, wages and earnings as they relate to industry were also among the most reported additional information needs. Users also noted an information need from the Census Program related to dwelling details and unpaid work. Without further details on the nature of their information requirements, such as specific sub-population groups or specific needs related to occupation, industry, and dwellings, it is difficult to confirm whether the current Census Program topics or other data programs at Statistics Canada have content that meets these needs[15] or if the data users have reported an unmet need.

Researchers are also major users of Census Program data. For example, between July 2007 and December 2010, 203 research projects using Census Program data were undertaken by university, federal or provincial government researchers at Statistics Canada's research data centres (RDCs).[16]

These are only a few illustrations of the uses of Census Program data that came out of the feedback in the summer and fall of 2011, and from analysis of the research undertaken in the RDCs. They demonstrate the extent to which Census Program data are integrated into government planning and programs, as well as the use of this information in non-government activities.

14. The mission of the FCFA is to serve as an active, involved and inclusive voice for Canada's Francophone and Acadian communities at the national level. The organization is committed to promoting linguistic duality, supporting the ability of Canadians everywhere to live in French, and fostering the full participation of French-speaking citizens to Canada's development.
15. No documents were provided to users on the information available through the survey and administrative data programs at Statistics Canada, or the type of detailed information currently available from the Census Program. As a result, it may be that some information needs raised by users may already be met through these other programs or through the Census Program itself.
16. Census Program microdata files were added to the RDC data holdings for the first time in 2007.

3.3.2 Multivariate analysis

An important strength of the Census Program information is its capacity to be used in multivariate analysis. This is the ability to examine the interrelationships among the different variables. This type of analysis is possible using Census Program data because all variables derived from the questions are available for each individual, household and dwelling with a common reference point (e.g., Census Day).

The Census Program, specifically the National Household Survey in 2011, includes two types of content; one of which identifies populations of interest, which are then often compared to the general population and the other which describes conditions of populations of interest.

The feedback received from key data users and stakeholders, during the summer and fall of 2011, on their Census Program information requirements provides evidence of the interplay of these two types of content and the importance of the multivariate nature of the Census Program data to these data users.

For example, more than half of the uses reported to Statistics Canada need information from the Aboriginal topic, which includes four questions (Ethnic or cultural origins; Aboriginal groups; Registered or Treaty Indian Status; and Membership in a First Nation or Indian band). Close to 80% of these uses that require information from the Aboriginal topic were reported to also need additional Census Program information derived from the education, labour market, housing and income topics.

Some of these uses include those related to programs and policies associated with the *National Housing Act* and the *Employment Equity Act* and its *Employment Equity Regulations*; recruitment at National Defence and the Canadian Forces; strategic policy research at Public Safety Canada; modelling, projections and risk assessments at the Public Health Agency of Canada; multiple programs under the First Nations and Inuit (FNI) Health policy planning and analysis at Health Canada; provincial programs and policies, such as Health Program planning, monitoring and evaluation in New Brunswick; Child Welfare Services, Career and Employment Services in Saskatchewan; the Alberta Government Health and Wellness Business Plan 2011-14; Poverty Reduction Strategy in Newfoundland and Labrador; local government uses, such as the City of Toronto Diversity and Positive Workplace Strategy; and the use of this information by the First Nations Statistical Institute (FNSI) to support FNSIs sister institutions in terms of First Nations financial and economic activities.

Similar requirements were reported for the topics on visible minority/population group, and citizenship and immigration. This provides clear indication that while counting specific subpopulations is of importance to users, characterizing the conditions in which these subpopulations live and how these conditions are changing over time is even more critical.

3.3.3 Potential use of alternative data sources

Users were asked "Are there other data holdings, within your organization, which can provide the same information as census and NHS data?" and to list them, along with the barriers associated with accessing or limitations in using these data holdings.

Among those responses received,[17] for over 90% of uses the user indicated that there were no alternative data sources within their own organizational holdings. Of those uses where an alternative source was identified (mostly by federal or provincial government users) the responses were focussed on the limitations and barriers of using alternative data in the event that Census Program data were not available.

The process associated with gaining access to alternative data sources, such as administrative data, specifically, privacy controls and the *Privacy Act*, were noted by Human Resources and Skills Development Canada as considerations for those who might wish to use these sources in lieu of Census Program data. Canadian Heritage echoed this point in their submission, noting that the costs and accessibility of obtaining data were barriers to the use of administrative data in the event that Census Program data were not available. Other federal government data users, including Industry Canada, Aboriginal Affairs and Northern Development Canada, and Health Canada noted limitations of alternative data sources in terms of reliability, data quality and the range of information these sources might provide. Costs associated with alternative data sources were also mentioned by Canadian Heritage and Industry Canada as barriers.

When analyzed by topic, the pattern of feedback was consistent: no topic stands out as having a suitable alternative data source. For every topic, more than 80% of the uses were reported not having a suitable alternative data source within the holdings of the data user.

3.3.4 Importance of a point-in-time estimate versus a 'rolling' estimate

The Census Program in Canada provides a point-in-time estimate (snapshot), but one of the other approaches to census-taking, used in France for the census and in the United States in the American Community Survey, provides a different type of estimate called a 'rolling' estimate.

Data users were asked to provide their opinion on the suitability of such an estimate for their Census Program information uses. To ensure a common understanding of these rolling estimates the following definition was provided, that rolling estimates are defined as data collected via a continuous survey, which are cumulated over time to provide sufficient sample size. Rolling estimates are based on moving averages over a certain time period (e.g., one-year averages for large areas, three-year averages for medium-sized areas and five-year averages for small areas). Each year, new estimates are produced by replacing the oldest year of data with the most recent year.

Information provided by responding organizations indicated that there was limited support for rolling estimates as a replacement for point-in-time estimates, but it is possible that some data users did not understand sufficiently what a rolling estimate was, and that some users may not have been able to assess the potential use of such an estimate in lieu of a point-in-time estimate. The majority of the uses (61%)[18] were identified as having an essential or a strong need for a point-in-time estimate, meaning that a rolling estimate would not be appropriate. A further 33% of the uses reported some need for a point-in-time estimate. A very small number of uses (6%) were reported as having no need for point-in-time estimates and that a rolling estimate would be appropriate.

17. Uses where no information was provided on alternative data sources were excluded from the analysis.
18. Uses where no information was provided on the appropriateness of rolling estimates were excluded from the analysis.

4. Content determination framework background

The proposed framework for the 2016 Census Program and beyond builds on experience in previous Canadian Census Programs[19] (Statistics Canada 2008b, p. 8), the United Nations (UN) principles of census-taking (United Nations 2008), and approaches developed in other countries, in particular, the United Kingdom (Office for National Statistics 2006). It reflects the views on 2016 Census content criteria presented in the National Statistics Council's *Seeking Solutions* document.[20] The intent is to have a process that is transparent to data users and all Canadians, and takes into account the Canadian context.

Chapter VI of United Nations (2008) states that the topics to be selected should be based upon a balanced consideration of:

- the needs of the broad range of data users in the country
- achievement of the maximum degree of international comparability, both within regions and on a worldwide basis
- the probable willingness and ability of the public to give adequate information on the topics
- the total national resources available for conducting the census.

The United Nations Economic Commission for Europe (UNECE 2006, p. 8) of which Canada is a member, suggests the following criteria:

- The topic carries a strong and clearly defined user need.
- There are no other means than the census to collect data on the topic.
- Data on the topic are required for small population groups and/or at detailed geographical levels.
- The topic is of major national importance and relevant at the local level.
- Data on the topic are expected to be used in multivariate analyses with other census topics.
- The content does not differ drastically from previous censuses and where appropriate a new or modified topic can still provide comparison with previous censuses.

As well, the UNECE notes when a topic should **not** be included in a census:

- It is sensitive or potentially intrusive, or requires lengthy explanations or instructions to ensure an accurate answer.
- It imposes an excessive burden on respondents, or seeks information not readily known or that people are unlikely to remember accurately.
- It enquires about opinions or attitudes.
- It is likely to present major coding problems or extensive processing or significantly add to the overall cost of the census.

---

19. Support to legislation, program and policy needs, respondent burden, data quality, costs, historical comparability, privacy, operational considerations and alternative data sources are all factors cited in the 2011 Census Content Consultation Report (http://www12.statcan.gc.ca/census-recensement/2011/consultation/ContentReport-RapportContenu/index-eng.cfm).
20. The National Statistics Council (2010) issued a press release on July 26, 2010, which included a statement *Seeking Solutions* which recommended a five-part test for inclusion of questions in the census.

The Office for National Statistics (ONS) process for the development of content for their 2011 Census questionnaire saw possible census topics broken into themes, like labour market/employment, migration, income, etc., with initial content directions. These initial directions (i.e., what might be new topics required, what topics might be excluded as not working well or not much use made) were shared with data users in a first report on content directions for the 2011 Census (Office for National Statistics 2005).

In that report the ONS asked data users to provide their views on where they agreed or not with the proposed directions, and why certain themes must be on the census, and what topics were needed for multivariate analysis and for what purposes. Data users were also presented with the user requirement criteria to be used to evaluate the strength of requests for information, comprised of six elements, namely:

- user need
- small population groups and small geographical areas
- alternative sources
- multivariate analysis
- national importance and UK comparability
- continuity.

Users were likewise presented the four additional criteria for ONS to consider, namely:

- respondent burden and data quality
- operational considerations
- questionnaire design
- legislation and international recommendations.

The ONS response to the consultation, where the assessment of each topic was presented, notably in terms of the user requirement criteria and the ONS considerations and other reasons for collection, was subsequently released. In this report the ONS outlined the weights for each user requirement criterion and associated scoring range for the various classifications within each criterion (Office for National Statistics 2006).

The National Statistics Council proposed a set of criteria to be used by Statistics Canada in designing the questionnaire for the 2016 Census (National Statistics Council 2010). All questions, the Council said, should meet at least one of five proposed tests as was presented in the statement from the National Statistics Council *Seeking Solutions*. The National Statistics Council suggested that the consultation process be one whereby Statistics Canada would access the need for each question to ensure that it, at a minimum, meets one of the following tests for inclusion in the census:

- It is required by legislation or Cabinet direction.
- It is needed for small-area data uses for which there is no alternative data source.
- It is needed to create benchmarks for measuring difficult-to-reach groups and ensuring that subsequent surveys or data derived from administrative sources can be sampled or weighted to reflect accurately the overall population.
- It is needed to assess progress on issues of national importance, for example the economic integration of new immigrants.

- It is to be used as a basis for postcensal survey sampling of relatively small or dispersed groups, for example, urban Aboriginals or people with health conditions that limit their activity.

The National Statistics Council provided a further criterion, that even if a question met this requirement, it would still face tests of its overall importance to the Canadian statistical system and the needs of data users as weighed against cost and the intrusiveness of the question.

5. Content determination framework for 2016

The content determination framework proposed for the 2016 Census Program and beyond is a three-step process. It is iterative, meaning that each step is not executed in isolation of the other two steps and that it may need to be repeated, at least partially, as information on other steps is gathered. Table 1 summarizes this process and the dimensions considered at each step. It begins with consulting external stakeholders on their uses of the data, and the related information requirements including the requirements for relevance (topics/variables and frequency) and quality (accuracy, interpretability, coherence).

Extensive consultation with users has always been a key activity performed at the start of each Census Program cycle, typically beginning four years before Census Day. As a result, the content of the Census Program has evolved based on changes in Canadian society and the attendant data needs and priorities of the government. For each round of Census Program planning, the competing requirements of time series integrity versus changing priorities and emerging needs are balanced to determine changes to the questionnaire(s). Content decisions must also take into consideration the much broader issues of respondent burden, privacy, quality and cost. Statistical organizations are held accountable to data users, decision makers and the public to demonstrate that they have done so.

The second step is the assessment of the Canadian context which encompasses respondent burden and societal privacy concerns. This will require discussions with internal stakeholders to assess if the proposed content would likely generate excessive response burden, and with external advisory bodies such as the Office of the Privacy Commissioner of Canada and the NSC to determine whether the proposed content raises serious societal privacy concerns. Depending on the issues raised at this stage there may be a need to go back to the first step to see how these concerns might be addressed in light of the information needs. The balance of topics, i.e., the number of questions on a given topic as compared with other topics and in the context of total respondent burden, will start to be considered in this step. This could result in four possible blocks:

(1) Mandatory full enumeration – Topics/variables labelled for 'full enumeration' in Step 1 for which there are no major indications of burden and privacy intrusiveness
(2) Mandatory sample – Topics/variables labelled for 'full enumeration' in Step 1 for which there are major indications of burden (but no major indication of privacy intrusiveness) and topics/variables labelled for 'sample' in Step 1 for which there are no major indications of privacy intrusiveness
(3) Voluntary sample – Topics/variables labelled for 'full enumeration' or 'sample' in Step 1 for which there are major indications of burden **and** privacy intrusiveness
(4) Not to be collected in the Census Program.

The third and final step is the assessment of the Census Program content requirements in the context of Statistics Canada considerations. They include costs, operational factors, safeguards against loss of Census Program data quality and safeguards against loss of efficiency and/or quality in other Statistics Canada programs. The balance of topics included in the questionnaire will be once again considered. This step will require consultation with stakeholders internal to Statistics Canada. Depending on the outcome, there may be a need to go back to the first two

steps to see how concerns raised might be addressed in light of the information needs. This could result in some further changes to the content assigned to each block in Step 2.

Table 1 Steps of the content determination framework and their dimensions

<table>
<tr><th>Steps</th><th colspan="2">Dimensions</th></tr>
<tr><td>Step 1:
Census Program information needs
(relevance and quality requirements of users)</td><td colspan="2">• strength of user need
• size of the population of interest
• suitability of alternative sources
• multivariate analysis
• comparability across Canada
• continuity over time
• frequency of outputs</td></tr>
<tr><td>Step 2:
Canadian context</td><td>• respondent burden
• societal privacy concerns</td><td rowspan="2">Balance of topics</td></tr>
<tr><td>Step 3:
Statistics Canada considerations</td><td>• costs
• operational factors
• safeguards against loss of Census Program data quality
• safeguards against loss of efficiency and/or quality in other Statistics Canada programs</td></tr>
</table>

The rest of this section focuses on Step 1. Section 5.1 further explains how each dimension will be evaluated. The information provided to Statistics Canada by data users on their Census Program data uses and requirements, and highlighted in Section 3.3 served as a means to assess if this would be a suitable process to determine the content of the 2016 Census Program.

More information on Steps 2 and 3 can be found in the *Final Report on 2016 Census Options: Proposed Content Determination Framework and Methodology Options* at http://www12.statcan.gc.ca/census-recensement/fc-rf/reports-rapports/r2_index-eng.cfm.

5.1 Step 1 – Census Program information needs: relevance and quality requirements of users

The first step in planning any Census Program has always been to consult users about their information needs. The consultation process proposed for the 2016 cycle and beyond builds on previous Census Program consultation processes (Statistics Canada 2008b, p. 8) but includes a framework in order to provide more structure to it. It incorporates the recommendations of the National Statistics Council (2010) and the transparency and structure of the Office for National Statistics' approach in the United Kingdom for their 2011 Census (Office for National Statistics 2006).

The role of users will be to describe their Census Program data needs to Statistics Canada in terms of the seven dimensions under Step 1 in Table 1. The requirements will then be evaluated to establish the priority ranking of each topic and question to determine whether the Census Program is the appropriate instrument for a particular topic/question.

Each topic and each question will first be classified and then ranked from highest to lowest priority on each of the seven dimensions shown above in Step 1.

In terms of the **strength of user need**, 10 different levels of priority have been identified, as shown in Table 2. In general, statutory and regulatory uses, being tied to law, will be highest priority. Uses related to resource allocation and service delivery will also be high priority because of the direct impact on government spending and financial decisions. Planning, development monitoring, evaluation and performance reports related to programs or policies will be medium priority, as they measure accountability and inform Canadians about efficiency and effectiveness of government programs. The remaining uses, such as research, will be considered lower priority. Those information needs which serve a purpose which is national in scope will have the highest priority. Given the national role of the federal government, its uses will be assigned a higher priority than other government and non-government uses.

Thus, the highest priority will be given to federal government uses for which there is an explicit or implicit statutory or regulatory requirement. Explicit means that the legislation/regulation mentions the census specifically, while implicit signifies that the Census Program, meaning the census and/or NHS, is the traditional source of information, although it is not explicitly noted in the legislation or regulation. This approach reflects one of the recommendations put forward by the National Statistics Council (2010).

Table 2 Ranking for the dimension 'strength of user need'

Rank	Use	User
1	Statutory or regulatory: explicit or implicit	Federal government
2	Statutory or regulatory: explicit or implicit	Other government
3	Resource allocation for programs and policies	Federal government
4	Service delivery for programs	Federal government
5	Resource allocation for programs and policies	Other government
6	Service delivery for programs	Other government
7	Planning, development, monitoring, evaluation, and performance reports related to programs or policies	Federal government
8	Planning, development, monitoring, evaluation, and performance reports related to programs or policies	Other government
9	Research and other uses	All users
10	No user need	

In terms of the **size of the population of interest**, a higher priority will be assigned to uses that require data for small geographic areas or small groups of interest. Needs for data by dissemination area or census tract will be higher priority than those at the census metropolitan area (CMA) level, which in turn will be higher than those at the provincial/territorial level. Likewise, needs for smaller populations of interest such as recent immigrants, will be higher priority than those for larger groups such as the employed population.

This is consistent with the UNECE criteria and the National Statistics Council recommendations referred to earlier. It also recognizes that data for larger geographic areas and population groups can be collected through sample surveys while it is difficult to do so for smaller geographic areas or population groups. When the population of interest, geographic area or population group, is small it typically means that in order to produce estimates with small sampling error it may be necessary to sample a large fraction of the population. In such cases, for minimal additional cost, data can be available for the entire population instead of just a portion of it.[21]

With respect to the **suitability of alternative sources**, those topics for which no alternative sources exist will be highest priority while those for which alternative sources are readily available will be lowest. Again, this is consistent with the UNECE criteria and the National Statistics Council recommendations.

Multivariate analysis is the ability to examine the interrelationships among the different variables, for example, age, education, income and immigrant status. This type of analysis is possible using Census Program data because all variables derived from the questions are available for each individual, household and dwelling, with a common reference point (e.g., Census Day). It is a significant strength when used to examine complex relationships among variables. Those uses for which there is a requirement for multivariate analysis or cross-classification of data will be higher priority than those for which a one-dimensional profile is needed. This is another of the UNECE criteria.

21. A discussion of key survey design considerations can be found in *Survey Methods and Practices*, catalogue no. 12-587-X, at http://www.statcan.gc.ca/pub/12-587-x/12-587-x2003001-eng.pdf.

In terms of the need for data to be **comparable across Canada** and the need for data to be comparable over time (**continuity over time**), i.e., for trend analysis, for each of these two dimensions, highest priority will be assigned to uses for which comparability is essential and lowest priority to those for which there is no need. These are based on the UNECE criteria of including topics of national importance (comparable across the country) and that will provide comparison with previous Census Programs.

Finally, as these dimensions are to help determine the content of the 2016 Census Program, the highest priority for **frequency of outputs**, will be topics which are needed every five years, i.e., to be collected in 2016, followed by those which are needed every ten years, i.e., not before 2021. Those which are needed only one time or more frequently than every five years would be lowest priority as the Census Program is likely not the appropriate collection instrument.

Once each topic and each question is classified and ranked from highest to lowest priority on each of the seven dimensions, the information for a topic/question will be synthesized to give an overall high, medium, low information need priority to the topic/question. Of these seven dimensions, the ones which will be most important are strength of user need, followed by size of population of interest and suitability of alternative sources.

The above list of topics and questions will be further classified into topics and questions that require a higher or lower level of precision and a higher or lower level of detail. For those topics and questions that have been asked in the past, the recent split between full enumeration and sample-based collection will be an important aspect to consider.

The ultimate output of Step 1 will be a preliminary list of topics and variables which could be divided into up to three possible groups:

- Full enumeration – To be asked of 100% of the population because they have a high information need priority **and** they require a very high level of precision at the very smallest sized population of interest (geographic levels)
- Sample – To be asked of a sample of the population because they have either a high or medium information need priority **and** they require a lesser degree of precision
- Not to be collected in the Census Program – They have the lowest information need priority or may be more suitable for collection through other statistical programs.

6. Conclusions

As part of the 2016 Census Strategy Project, Statistics Canada has developed a content determination framework, including criteria for inclusion of content in the 2016 Census Program. This included the design of a user consultation instrument to gather information on Census Program data uses and requirements. The instrument was applied to key stakeholders in support of the principle objective of the 2016 Census Strategy Project to study options and deliver a recommendation to the federal government on the methodology of the 2016 Census Program.

Responses from all levels of government, or their representatives, as well as feedback from the non-government sector, on their Census Program data uses and requirements was sufficiently detailed and of fitting quantity to allow Statistics Canada to analyze the responses and to develop a possible content determination framework for the 2016 Census.

The requirement for information from all Census Program topics was confirmed, with the demographic topic, and in particular the population counts across a number of jurisdictions, noted in the overwhelming number of uses. Further, the population counts from the Census Program, and their role in the Population Estimates Program, were identified in federal and provincial/territorial legislations, associated with resource allocation and electoral requirements (number of seats by federal electoral boundaries).

The information submitted to Statistics Canada demonstrated the requirements for Census Program information for small geographic areas and for small populations, for service delivery and the development, evaluation and monitoring of policy and programs, for which there are currently no suitable alternative data sources. The data users likewise provided evidence of the importance of multivariate analysis which calls for both topics which can identify populations of interest, but also topics which can describe the labour, income, education and housing conditions of these populations.

The Census Program information requirements of the non-government sector mirrored those of government, in particular for data needs related to small geographic areas and for small populations.

Analysis of the structured feedback revealed that relative priorities of different topics could be identified through the information collected using this type of consultation questionnaire instrument. This analysis, along with a review of international practices and the recommendations of the National Statistics Council, provided the quantity and quality of information needed to develop a more structured and transparent framework for determining content in the future.

Specifically, the content determination process used for 2016, and beyond, should build on previous Census Program processes and:

- be open and transparent for stakeholders and data users, as well as for the Canadian public
- demonstrate evidence-based decision making in reaching content determination conclusions.

The requirements should be prioritized, based on the dimensions outlined in Table 1 in Section 5, and could result in a division of the content into three possible groups:

- to be asked on a full enumeration basis
- to be asked on a sample basis
- not to be collected in the Census Program, though perhaps which could be measured through other statistical programs.

The requirements will be further refined in the context of respondent burden and privacy concerns. This could result in four possible blocks:

(1) Mandatory full enumeration – Topics/variables labelled for 'full enumeration' for which there are no major indications of burden and privacy intrusiveness.
(2) Mandatory sample – Topics/variables labelled for 'full enumeration' for which there are major indications of burden (but no major indication of privacy intrusiveness) and topics/variables labelled for 'sample' for which there are no major indications of privacy intrusiveness.
(3) Voluntary sample – Topics/variables labelled for 'full enumeration' or 'sample' for which there are major indications of burden **and** privacy intrusiveness.
(4) Not to be collected in the Census Program, though perhaps which could be measured through other statistical programs.

There will then be a discussion with internal stakeholders to assess Statistics Canada considerations such as those related to costs, operational factors, safeguards against loss of Census Program data quality and safeguards against loss of efficiency and/or quality in other Statistics Canada programs.

An iterative approach of the above steps was applied for the collection of detailed descriptions from these data users on their Census Program information needs and requirements. The structured feedback received by the 2016 Census Strategy Project aligns well with the information requirements of the proposed 2016 Census content determination framework.

The online questionnaire tool used to gather feedback in the 2016 Census Strategy Project, with further refinements, will be used in future consultations to engage more broadly on information needs at the topic and variable level.

7. References

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Statistics Canada. 2008. *2011 Census Content Consultation Report – Census Year 2011.* Statistics Canada Catalogue no. 92-137-X.

United Nations. 2008. *Principles and Recommendations for Population and Housing Censuses, Revision 2.* ST/ESA/STAT/SER.M/67/Rev.2. United Nations Publication.

United Nations Economic Commission for Europe (UNECE). 2006. *Conference of European Statisticians Recommendations for the 2010 Censuses of Population and Housing.* ECE/CES/STAT/NONE/2006/4. United Nations Publication.

Appendix A Federal departments and agencies asked to provide information in Wave 1

Aboriginal Affairs and Northern Development Canada
Agriculture and Agri-Food Canada
Atlantic Canada Opportunities Agency
Canada Border Services Agency
Canada Economic Development for Quebec Regions
Canada Mortgage and Housing Corporation
Canada Revenue Agency
Canadian Food Inspection Agency
Canadian Heritage
Canadian International Development Agency
Canadian Security Intelligence Service
Canadian Space Agency
Citizenship and Immigration
Correctional Service Canada
Department of Finance Canada
Department of Justice Canada
Elections Canada
Environment Canada
Fisheries and Oceans Canada
Foreign Affairs and International Trade Canada
Health Canada
Human Resources and Skills Development Canada

Appendix A Federal departments and agencies asked to provide information in Wave 1 (continued)

Industry Canada
Library and Archives Canada
National Defence and the Canadian Forces
National Research Council Canada
Natural Resources Canada
Parks Canada
Privy Council Office
Public Health Agency of Canada
Public Safety Canada
Public Service Commission of Canada
Public Works and Government Services Canada
Royal Canadian Mounted Police
Status of Women Canada
Transport Canada
Treasury Board of Canada Secretariat
Veterans Affairs Canada
Western Economic Diversification Canada

Appendix B Data uses and requirements questionnaire (Wave 1)

Data Uses and Requirements_1

Statistics Canada recently launched the **2016 Census Strategy Project** as part of its customary statistical program review. This project will conduct a review of the approaches for population censuses that exist around the world, and evaluate their applicability to the Canadian context as well as their adherence to Statistics Canada's mandate and business model. This review will comprise general methodological approaches and content determination frameworks, including criteria for inclusion of content in the census.

A better understanding of the highest priority census information needs is important in order to effectively address how different approaches for population censuses can respond to user information requirements.

As part of the 2016 Census Strategy Project, Statistics Canada will engage all levels of government with the intent of improving its repository of legislations, regulations, policies and programs where census is ***explicitly mentioned***. For the purpose of this consultation, please consider both the census and National Household Survey (NHS). Secondary information is also being sought on high priority ***implicit*** requirements for census and NHS data necessary for legislations and regulations, or for policy, program and research needs.

As a valued partner and stakeholder, we would like to obtain your feedback via an on-line questionnaire designed to collect specific details on key legislative, regulatory, policy, program, and other requirements for census and NHS data. This questionnaire also seeks information on existing data holdings within your organization which Statistics Canada could consider in evaluating the feasibility of increased use of administrative data in future censuses.

Please submit your responses to the **Data Uses and Requirements** questionnaire by:

- Part 1: Legislative, regulatory, policy and program requirements (explicit)* - June 15, 2011
- Part 2: Legislative, regulatory, policy and program requirements (implicit)* - June 15, 2011
- Part 3: Other uses of census and NHS data - July 20, 2011

*Please note that Part 3 on policy and program requirements in the PDF questionnaire sent to you previously has been integrated into parts 1 and 2.

Responses will be considered representative of your organization and may be included in official documentation on this project.

Should you have questions about this initiative, please communicate with Marie Anderson, Census Marketing at censusconsultation@statcan.gc.ca.

Thank you for your participation and ongoing support.

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

Part 1: Legislative, regulatory, policy and program requirements (explicit)

*Please provide details about how you use census data for **each** legislation, regulation, policy and program that is relevant to your organization by answering questions 1 to 11 below. This would include those key legislations, regulations, policies and programs where census data are **explicitly** mentioned. For the purpose of this consultation, please consider both the census and National Household Survey (NHS).*

Name of the legislation / regulation / policy / program

Enter name: _____

1. Please describe, **with as many categories as necessary**, how census and NHS data are currently being used to support this legislation / regulation / policy / program.

- O Resource allocation
- O Performance reports
- O Planning
- O Policy development
- O Program monitoring and evaluation
- O Research
- O Service delivery
- O Cross classification (multi-variate)
- O Geography distributions (geographic profiles)
- O Modelling and microdata analysis, using complex analytical techniques
- O Other, please specify.

_____
_____
_____
_____

2. Please check **all** the census and NHS topics that apply (e.g., education; labour).

- O Aboriginal Peoples
- O Activity limitations / disability
- O Basic demographics (age, sex, marital and civil status)
- O Citizenship and immigration
- O Education
- O Ethnic origin
- O Family characteristics
- O Housing / dwelling characteristics
- O Income
- O Labour market activity
- O Language
- O Mobility and migration
- O Place of work / travel to work
- O Population groups / visible minorities
- O Religion
- O Other, please specify.

_____
_____
_____

3. Please check **all** the levels of geography at which census and NHS data are needed (e.g., national; neighbourhood).

- O National
- O Provincial / territorial
- O Regional
- O Metropolitan area
- O Municipal
- O Neighbourhood
- O Other, please specify.

_____
_____
_____

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

4. Do you require data on any specific population groups? If yes, please check **all** that apply.

- O Aboriginal Peoples
- O Businesses
- O Condominium dwellers
- O Households in crowded housing
- O Institutions
- O Institutional residents
- O Language - Official language minority groups
- O Language - Other than official language minority groups
- O Lone-parent families
- O Low income families
- O Near retirees
- O Persons with activity limitations / disabilities
- O Population: provincial
- O Population: other
- O Recent immigrants
- O Same-sex couples
- O School age children
- O Seniors
- O Travellers to work
- O Visible minorities
- O Women
- O Working age
- O Youth
- O Other, please specify.

  _____
  _____
  _____

  OR

- O No

5. How long after the data are collected are they still useable for your needs? Please select **one** answer only.

- O For 6 months
- O For 1 year
- O For 2 years
- O For 5 years
- O For 10 years

6. How important is data comparability across the country, or provinces/territories? Please select **one** answer only.

Essential implies that data comparability across geographies is necessary to fulfill the needs of the legislative, regulation, policy or program identified. **Strong need** implies that while data comparability across geographies is not necessary, it is used to fulfill the needs of the legislative, regulation, policy or program identified. **Some need** implies that data comparability across geographies could be used to fulfill the needs of the legislative, regulation, policy or program identified. **No need** implies that data comparability across geographies is not used to fulfill the needs of the legislative, regulation, policy or program identified.

- O Essential
- O Strong need
- O Some need
- O No need

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

7. How important is data comparability over time (i.e., over three consecutive census cycles)? Please select **one** answer only.

Essential implies that data comparability over time is necessary to fulfill the needs of the legislative, regulation, policy or program identified. **Strong need** implies that while data comparability over time is not necessary, it is used to fulfill the needs of the legislative, regulation, policy or program identified. **Some need** implies that data comparability over time could be used to fulfill the needs of the legislative, regulation, policy or program identified. **No need** implies that data comparability over time is not used to fulfill the needs of the legislative, regulation or program identified.

- ○ Essential
- ○ Strong need
- ○ Some need
- ○ No need

8. How important is it that data represent a point-in-time estimate, i.e., a snapshot? An alternative would be a rolling estimate. Please select **one** answer only.

Rolling estimates are defined as data collected via a continuous survey, which are cumulated over time to provide sufficient sample size. Rolling estimates are based on moving averages over a certain time period (e.g., one-year averages for large areas, three-year averages for medium-sized areas and five-year averages for small areas). Each year, new estimates are produced by replacing the oldest year of data with the most recent year.

- ○ Essential to have point-in-time estimates (a rolling estimate would not be appropriate)
- ○ Strong need for point-in-time estimates (a rolling estimate would likely not be appropriate)
- ○ Some need for point-in-time estimates (a rolling estimate may also be appropriate)
- ○ No need for point-in-time estimates (a rolling estimate would be appropriate)

9. Describe the impact to your organization should the NHS information not be available. Please select **one** answer only.

Significant impact implies that no alternative solutions exist AND the legislation, regulation, policy or program cannot be discontinued. **Moderate** impact implies that alternative solutions could be found (conduct of new surveys or finding a new alternative data source) but these would result in less efficient programs (in terms of monetary allocation, allocation of services, ability to monitor a program, etc.) OR that this legislation, regulation, policy or program could be discontinued but not easily. **Minimal** impact implies that alternative solutions exist (previous census or NHS data, other current surveys, or administrative data) which would be equivalent to the use of NHS data OR that this legislation, regulation, policy or program could be discontinued with relative ease.

- ○ Significant, please explain. _____
- ○ Moderate, please explain. _____
- ○ Minimal, please explain. _____
- ○ Other, please explain. _____

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

10. Are there other data holdings, within your organization, which can provide the **same information** as census and NHS data? If yes, please list **all** that apply.

- O Yes, please list them.
  _____
  _____
  _____
  _____
- O No

11. Are there any barriers associated with accessing or limitations in using the data holdings indicated in question 10?

- O Yes, please list them.
  _____
  _____
  _____
  _____
- O No

FOR INFORMATION ONLY

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

Part 2: Legislative, regulatory, policy and program requirements (implicit)

*Please provide details about how you use census data for **each** legislation, regulation, policy and program that is relevant to your organization by answering questions 1 to 11 below. **Implicit** refers to those key legislations, regulations, policies and programs where census data are not explicitly mentioned, but are the traditional source in supporting them. For the purpose of this consultation, please consider both the census and National Household Survey (NHS).*

Name of the legislation / regulation / policy / program

Enter name: _____

1. Please describe, **with as many categories as necessary**, how census and NHS data are currently being used to support this legislation / regulation / policy / program.

- ○ Resource allocation
- ○ Performance reports
- ○ Planning
- ○ Policy development
- ○ Program monitoring and evaluation
- ○ Research
- ○ Service delivery
- ○ Cross classification (multi-variate)
- ○ Geography distributions (geographic profiles)
- ○ Modelling and microdata analysis, using complex analytical techniques
- ○ Other, please specify:

_____
_____
_____
_____

2. Please check **all** the census and NHS topics that apply (e.g., education; labour).

- ○ Aboriginal Peoples
- ○ Activity limitations / disability
- ○ Basic demographics (age, sex, marital and civil status)
- ○ Citizenship and immigration
- ○ Education
- ○ Ethnic origin
- ○ Family characteristics
- ○ Housing / dwelling characteristics
- ○ Income
- ○ Labour market activity
- ○ Language
- ○ Mobility and migration
- ○ Place of work / travel to work
- ○ Population groups / visible minorities
- ○ Religion
- ○ Other, please specify:

_____
_____
_____

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

3. Please check **all** the levels of geography at which census and NHS data are needed (e.g., national; neighbourhood).

- O National
- O Provincial / territorial
- O Regional
- O Metropolitan area
- O Municipal
- O Neighbourhood
- O Other, please specify.

_____
_____
_____

4. Do you require data on any specific population groups? If yes, please check **all** that apply.

- O Aboriginal Peoples
- O Businesses
- O Condominium dwellers
- O Households in crowded housing
- O Institutions
- O Institutional residents
- O Language - Official language minority groups
- O Language - Other than official language minority groups
- O Lone-parent families
- O Low income families
- O Near retirees
- O Persons with activity limitations / disabilities
- O Population: provincial
- O Population: other
- O Recent immigrants
- O Same-sex couples
- O School age children
- O Seniors
- O Travellers to work
- O Visible minorities
- O Women
- O Working age
- O Youth
- O Other, please specify.

_____
_____
_____

OR

- O No

5. How long after the data are collected are they still useable for your needs? Please select **one** answer only.

- O For 6 months
- O For 1 year
- O For 2 years
- O For 5 years
- O For 10 years

6. How important is data comparability across the country, or provinces/territories? Please select **one** answer only.

Essential implies that data comparability across geographies is necessary to fulfill the needs of the legislative, regulation, policy or program identified. **Strong need** implies that while data comparability across geographies is not necessary, it is used to fulfill the needs of the legislative, regulation or program identified. **Some need** implies that data comparability across geographies could be used to fulfill the needs of the legislative, regulation, policy or program identified. **No need** implies that data comparability across geographies is not used to fulfill the needs of the legislative, regulation, policy or program identified.

- O Essential
- O Strong need
- O Some need
- O No need

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

7. How important is data comparability over time (i.e., over three consecutive census cycles)? Please select **one** answer only.

   Essential implies that data comparability over time is necessary to fulfill the needs of the legislative, regulation, policy or program identified. **Strong need** implies that while data comparability over time is not necessary, it is used to fulfill the needs of the legislative, regulation, policy or program identified. **Some need** implies that data comparability over time could be used to fulfill the needs of the legislative, regulation, policy or program identified. **No need** implies that data comparability over time is not used to fulfill the needs of the legislative, regulation or program identified.

   - O Essential
   - O Strong need
   - O Some need
   - O No need

8. How important is it that data represent a point-in-time estimate, i.e., a snapshot? An alternative would be a rolling estimate. Please select **one** answer only.

   Rolling estimates are defined as data collected via a continuous survey, which are cumulated over time to provide sufficient sample size. Rolling estimates are based on moving averages over a certain time period (e.g., one-year averages for large areas, three-year averages for medium-sized areas and five-year averages for small areas). Each year, new estimates are produced by replacing the oldest year of data with the most recent year.

   - O Essential to have point-in-time estimates (a rolling estimate would not be appropriate)
   - O Strong need for point-in-time estimates (a rolling estimate would likely not be appropriate)
   - O Some need for point-in-time estimates (a rolling estimate may also be appropriate)
   - O No need for point-in-time estimates (a rolling estimate would be appropriate)

9. Describe the impact to your organization should the NHS information not be available. Please select **one** answer only.

   Significant impact implies that no alternative solutions exist AND the legislation, regulation, policy or program cannot be discontinued. **Moderate** impact implies that alternative solutions could be found (conduct of new surveys or finding a new alternative data source) but these would result in less efficient programs (in terms of monetary allocation, allocation of services, ability to monitor a program, etc.) OR that this legislation, regulation, policy or program could be discontinued but not easily. **Minimal** impact implies that alternative solutions exist (previous census or NHS data, other current surveys, or administrative data) which would be equivalent to the use of NHS data OR that this legislation, regulation, policy or program could be discontinued with relative ease.

   - O Significant, please explain. _____
   - O Moderate, please explain. _____
   - O Minimal, please explain. _____
   - O Other, please explain. _____

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

10. Are there other data holdings, within your organization, which can provide the **same information** as census and NHS data? If yes, please list **all** that apply.

- O Yes, please list them.
  _____
  _____
  _____
  _____
- O No

11. Are there any barriers associated with accessing or limitations in using the data holdings indicated in question 10?

- O Yes, please list them.
  _____
  _____
  _____
  _____
- O No

FOR INFORMATION ONLY

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

Part 3: Other uses of census and NHS data

*Please provide details about **each** of the other ways your organization makes use of census and National Household Survey (NHS) data in this section by answering questions 1 to 11 below.*

Name of the use of census / NHS data

Enter name: _____

1. Please describe, **with as many categories as necessary**, how census and NHS data are currently being used to support this activity.

- O Resource allocation
- O Performance reports
- O Planning
- O Policy development
- O Program monitoring and evaluation
- O Research
- O Service delivery
- O Cross classificaton (multi-variate)
- O Geography distributions (geographic profiles)
- O Modelling and microdata analysis, using complex analytical techniques
- O Other, please specify

_____
_____
_____
_____

2. Please check **all** the census and NHS topics that apply (e.g., education; labour).

- O Aboriginal Peoples
- O Activity limitations / disability
- O Basic demographics (age, sex, marital and civil status)
- O Citizenship and immigration
- O Education
- O Ethnic origin
- O Family characteristics
- O Housing / dwelling characteristics
- O Income
- O Labour market activity
- O Language
- O Mobility and migration
- O Place of work / travel to work
- O Population groups / visible minorities
- O Religion
- O Other, please specify.

_____
_____
_____

3. Please check **all** the levels of geography at which census and NHS data are needed (e.g., national; neighbourhood).

- O National
- O Provincial / territorial
- O Regional
- O Metropolitan area
- O Municipal
- O Neighbourhood
- O Other, please specify.

_____
_____
_____

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

4. Do you require data on any specific population groups? If yes, please check **all** that apply.

- ○ Aboriginal Peoples
- ○ Businesses
- ○ Condominium dwellers
- ○ Households in crowded housing
- ○ Institutions
- ○ Institutional residents
- ○ Language - Official language minority groups
- ○ Language - Other than official language minority groups
- ○ Lone-parent families
- ○ Low income families
- ○ Near retirees
- ○ Persons with activity limitations / disabilities
- ○ Population: provincial
- ○ Population: other
- ○ Recent immigrants
- ○ Same-sex couples
- ○ School age children
- ○ Seniors
- ○ Travellers to work
- ○ Visible minorities
- ○ Women
- ○ Working age
- ○ Youth
- ○ Other, please specify.

_____
_____
_____

OR

- ○ No

5. How long after the data are collected are they still useable for your needs? Please select **one** answer only.

- ○ For 6 months
- ○ For 1 year
- ○ For 2 years
- ○ For 5 years
- ○ For 10 years

6. How important is data comparability across the country, or provinces/territories? Please select **one** answer only.

Essential implies that data comparability across geographies is necessary for this use. **Strong need** implies that while data comparability across geographies is not necessary for this use, it is beneficial. **Some need** implies that data comparability across geographies could be beneficial for this use. **No need** implies that data comparability across geographies is not beneficial for this use.

- ○ Essential
- ○ Strong need
- ○ Some need
- ○ No need

7. How important is data comparability over time (i.e., over three consecutive census cycles)? Please select **one** answer only.

Essential implies that data comparability over time is necessary for this use. **Strong need** implies that while data comparability over time is not necessary for this use, it is beneficial. **Some need** implies that data comparability over time could be beneficial for this use. **No need** implies that data comparability over time is not beneficial for this use.

- ○ Essential
- ○ Strong need
- ○ Some need
- ○ No need

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

8. How important is it that data represent a point-in-time estimate, i.e., a snapshot? An alternative would be a rolling estimate. Please select **one** answer only.

   Rolling estimates are defined as data collected via a continuous survey, which are cumulated over time to provide sufficient sample size. Rolling estimates are based on moving averages over a certain time period (e.g., one-year averages for large areas, three-year averages for medium-sized areas and five-year averages for small areas). Each year, new estimates are produced by replacing the oldest year of data with the most recent year.

   - O Essential to have point-in-time estimates (a rolling estimate would not be appropriate)
   - O Strong need for point-in-time estimates (a rolling estimate would likely not be appropriate)
   - O Some need for point-in-time estimates (a rolling estimate may also be appropriate)
   - O No need for point-in-time estimates (a rolling estimate would be appropriate)

9. Describe the impact to your organization should the NHS information not be available. Please select **one** answer only.

   Significant impact implies that no alternative solutions exist AND this use cannot be discontinued. **Moderate** impact implies that alternative solutions could be found (conduct of new surveys or finding a new alternative data source) but these would result in less efficient use (in terms of monetary allocation, allocation of services, ability to monitor a program, etc.) OR that this use could be discontinued but not easily. **Minimal** impact implies that alternative solutions exist (previous census or NHS data, other current surveys, or administrative data) which would be equivalent to the use of NHS data OR that this use could be discontinued with relative ease.

   - O Significant, please explain. _____
   - O Moderate, please explain. _____
   - O Minimal, please explain. _____
   - O Other, please explain. _____

10. Are there other data holdings, within your organization, which can provide the **same information** as census and NHS data? If yes, please list **all** that apply.

    - O Yes, please list them.
      _____
      _____
      _____
      _____
    - O No

11. Are there any barriers associated with accessing or limitations in using the data holdings indicated in question 10?

    - O Yes, please list them.
      _____
      _____
      _____
      _____
    - O No

Appendix B Data uses and requirements questionnaire (Wave 1) (continued)

Data Uses and Requirements_1

Do you have any additional comments you would like to provide to Statistics Canada with regard to your census and NHS data needs?

- ○ No
- ○ Yes, please comment (150 words maximum).

_____
_____
_____
_____
_____
_____
_____
_____
_____

The responses you submit will be considered representative of your organization and may be included in official documentation on this project.

Thank you for participating in this consultation. Your feedback is important to us.

FOR INFORMATION ONLY

Appendix C Data uses and requirements questionnaire (Wave 2)

Statistics Canada recently launched the **2016 Census Strategy Project** as part of its customary statistical program review. This project will conduct a review of the approaches for population censuses that exist around the world, and evaluate their applicability to the Canadian context as well as their adherence to Statistics Canada's mandate and business model. This review will comprise general methodological approaches and content determination frameworks, including criteria for inclusion of content in the census.

A better understanding of the highest priority census information needs is important in order to effectively address how different approaches for population censuses can respond to user information requirements.

As part of the 2016 Census Strategy Project, Statistics Canada is engaging important data users in various sectors, including government, business and non-profit, with the intent of improving our understanding of how organizations use census data. For the purpose of this consultation, please consider both the census and National Household Survey (NHS).

We have developed and attached a short questionnaire for specific end-users. As a valued stakeholder who works with or represents many data users, we would like to obtain your feedback on key uses of census/NHS data. If you feel it is appropriate, please complete the appended **Census and NHS Data Uses** questionnaire, focusing on up to five of your organization's principal uses.

Alternatively you could provide a short overview of how census and NHS data are used by your clients or member organizations.

We are particularly interested in knowing about:

- the importance of decisions made using census and NHS data, in financial, human or other terms
- priority census variables of interest
- geographic areas of interest
- sub-populations of interest
- importance of comparability over time
- importance of comparability across geographic regions
- implications of not having NHS data

Please submit your feedback by **August 10, 2011**.

If you are not the appropriate person to complete this questionnaire, or alternatively, to provide a short overview of how census and NHS data are used by your clients or member organizations, we ask that you provide us with the name of the designated contact by **July 28, 2011**.

Your responses may be included in official documentation on this project.

Should you have questions about this initiative, please communicate with Marie Anderson, Census Marketing at censusconsultation@statcan.gc.ca.

Thank you for your participation and ongoing support.

Appendix C Data uses and requirements questionnaire (Wave 2) (continued)

Uses of census and NHS data

For each of the key uses identified, please provide details about the type and characteristics of the census and National Household Survey (NHS) data used by your organization by highlighting your responses to questions 1 through 10.

Use number _

Enter name: _____

1. Please indicate, with as many categories as necessary, how census and NHS data are currently being used in your organization.

- ○ Resource allocation
- ○ Performance reports
- ○ Planning, including program planning
- ○ Policy development
- ○ Program monitoring and evaluation
- ○ Research
- ○ Service delivery
- ○ Cross-classification (multi-variate)
- ○ Geography distributions (geographic profiles)
- ○ Marketing / market segmentation
- ○ Site location
- ○ Human resource planning
- ○ Modelling and microdata analysis, using complex analytical techniques
- ○ Other, please specify

2. Please select all the census and NHS topics that apply (e.g., education; labour).

- ○ Aboriginal Peoples
- ○ Activity limitations / disability
- ○ Basic demographics (age, sex, marital and civil status)
- ○ Citizenship and immigration
- ○ Education
- ○ Ethnic origin
- ○ Family characteristics
- ○ Housing / dwelling characteristics
- ○ Income
- ○ Labour market activity
- ○ Language
- ○ Mobility and migration
- ○ Place of work / travel to work
- ○ Population groups / visible minorities
- ○ Religion
- ○ Other, please specify

Appendix C Data uses and requirements questionnaire (Wave 2) (continued)

Census and NHS Data Uses
Use number _

3. Please select all the levels of geography at which census and NHS data are needed (e.g., national, neighbourhood).

- ○ National
- ○ Provincial / territorial
- ○ Regional
- ○ Metropolitan area
- ○ Municipal
- ○ Neighbourhood
- ○ Trade / service area
- ○ Dissemination area
- ○ Other, please specify.

4. Do you require data on any specific population groups? If yes, please select all that apply.

- ○ Aboriginal Peoples
- ○ Businesses
- ○ Condominium dwellers
- ○ Households in crowded housing
- ○ Institutions
- ○ Institutional residents
- ○ Language - Official language minority groups
- ○ Language - Other than official language minority groups
- ○ Lone-parent families
- ○ Low income families
- ○ Near retirees
- ○ Persons with activity limitations / disabilities
- ○ Population: provincial
- ○ Population: other
- ○ Recent immigrants
- ○ Same-sex couples
- ○ School age children
- ○ Seniors
- ○ Travellers to work
- ○ Visible minorities
- ○ Women
- ○ Working age
- ○ Youth
- ○ Other, please specify.

OR

- ○ No

5. How long after the data are collected are they still useable for your needs? Please select one answer only.

- ○ For 6 months
- ○ For 1 year
- ○ For 2 years
- ○ For 5 years
- ○ For 10 years

6. How important is data comparability across the country, or provinces/territories? Please select one answer only.

Essential implies that data comparability across geographies is necessary for this use. Strong need implies that while data comparability across geographies is not necessary for this use, it is beneficial. Some need implies that data comparability across geographies could be beneficial for this use. No need implies that data comparability across geographies is not beneficial for this use.

- ○ Essential
- ○ Strong need
- ○ Some need
- ○ No need

Appendix C Data uses and requirements questionnaire (Wave 2) (continued)

7. How important is data comparability over time (i.e., over three consecutive census cycles)? Please select one answer only.

Essential implies that data comparability over time is necessary for this use. **Strong need** implies that while data comparability over time is not necessary for this use, it is beneficial. **Some need** implies that data comparability over time could be beneficial for this use. **No need** implies that data comparability over time is not beneficial for this use.

- ○ Essential
- ○ Strong need
- ○ Some need
- ○ No need

8. How important is it that data represent a point-in-time estimate, i.e., a snapshot? An alternative would be a rolling estimate. Please select one answer only.

Rolling estimates are defined as data collected via a continuous survey, which are cumulated over time to provide sufficient sample size. Rolling estimates are based on moving averages over a certain time period (e.g., one-year averages for large areas, three-year averages for medium-sized areas and five-year averages for small areas). Each year, new estimates are produced by replacing the oldest year of data with the most recent year.

- ○ Essential to have point-in-time estimates (a rolling estimate would not be appropriate)
- ○ Strong need for point-in-time estimates (a rolling estimate would likely not be appropriate)
- ○ Some need for point-in-time estimates (a rolling estimate may also be appropriate)
- ○ No need for point-in-time estimates (a rolling estimate would be appropriate)

9. Describe the impact to your organization should the NHS information not be available. Please select one answer only.

Significant impact implies that no alternative solutions exist AND this use cannot be discontinued. **Moderate** impact implies that alternative solutions could be found (conduct of new surveys or finding a new alternative data source) but these would result in less efficient use (in terms of monetary allocation, allocation of services, ability to monitor a program, etc.) OR that this use could be discontinued but not easily. **Minimal** impact implies that alternative solutions exist (previous census or NHS data, other current surveys, or administrative data) which would be equivalent to the use of NHS data OR that this use could be discontinued with relative ease.

- ○ Significant, please explain. _____
- ○ Moderate, please explain. _____
- ○ Minimal, please explain. _____
- ○ Other, please explain. _____

10. **Regarding this use**, please provide any additional comments, if any.

- ○ No
- ○ Yes, please comment (150 words maximum).

_____
_____
_____
_____
_____
_____
_____
_____
_____

Appendix D Data uses by Census Program topic (available upon request)

Appendix D consists of a table reporting over 800 data uses by Census Program topic, as reported by the respondents of the data uses and requirements questionnaire. Please contact the Census Consultation Team (censusconsultation@statcan.gc.ca) for more information and to request a copy of this appendix.